

Appl. No. : 10/092,966
Filed : March 5, 2002

REMARKS

Claims 1 and 3-14 have been amended to clarify the invention. Support for the amendment to Claim 1 can be found in Figs. 1-3, for example. Claims 3 and 5 have been rewritten in independent form. Claim 2 has been canceled without prejudice. Claims 15-22 have been added. Support for the added claims can be found in the existing claims. The amendments do not constitute the addition of any new matter to the specification. Applicant respectfully requests entry of the amendments and reconsideration of the application in view of the amendments and the following remarks.

Rejection of Claims 1-14 Under 35 U.S.C. § 112

Claims 1-14 have been rejected under 35 U.S.C. § 112, second paragraph, with regard to the unclear and indefinite phrase set forth in the Office Action. The claims have been amended to clarify that the carrier sheet is a requirement of the claimed method, thereby obviating the rejection. Applicant respectfully requests withdrawal of this rejection.

Rejection of Claims 1-14 Under 35 U.S.C. § 103

Claims 1-14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsukagoshi et al. (US 6,479,757). However, the disclosure of Tsukagoshi et al. is inconsistent with the Examiner's assertion set forth in the Office action. Applicant believes that the Examiner is in error and Uriu et al. (US 5,647,966) should have been cited instead of Tsukagoshi et al., because the Examiner's assertions appear to be consistent with Uriu et al. Hereafter, Applicant will argue against Uriu et al. The claims amended herein could not be obvious over Uriu et al. as explained below. Claims 1, 3 and 5 are independent and the remaining claims are ultimately dependent on either one of the independent claims.

As to Claim 1, the Examiner asserts that Uriu teaches a method for manufacturing a ceramic green sheet inductor, and that the method comprises the steps of forming a conductive electrode pattern 15 on an adhesive layer 16 which is separable by being heated.

However, Claim 1 has been amended to recite "forming a predetermined electrode pattern on said adhesive layer, said adhesive layer being separable from said electrode pattern by being cured with UV." Uriu et al. does not teach or even suggest an adhesive layer which is separable by being cured with UV.

Moreover, Claim 1 has been amended to recite “applying a ceramic slurry onto (A) said electrode pattern formed on said adhesive layer and (B) an exposed surface of said adhesive layer to form a ceramic binder layer which adheres to said electrode pattern and said exposed surface, thereby forming a ceramic green sheet on the carrier sheet.” That is, in Claim 1 as amended, the green sheet has a flat surface (no convex portions of the electrode pattern) when the green sheet is separated from the adhesive layer of the carrier sheet because the ceramic slurry contacts the exposed surface of the adhesive layer.

In contrast, as is apparent from Fig. 6 of Uriu et al., a green ceramic sheet 19 adheres to the conductive electrode pattern 15, but the sheet 19 does not adhere to an exposed surface of the adhesive layer 16 on which the electrode pattern 15 is not formed, thereby forming convex portions of the electrode pattern. In Uriu et al., a convex portion of the electrode pattern 15 causes problems especially when a number of laminated layer is increased: Possible shifts between ceramic green sheets may be caused, and lamination with expected accuracy cannot be attained (see description of the prior art on page 2, lines 12-17 of the present specification).

In contrast, in Claim 1 as amended herein, lamination with expected accuracy can be obtained by forming a ceramic binder layer which adheres to both of the electrode pattern and the exposed surface of the adhesive layer on which the electrode pattern is not formed, i.e., forming no space between the adhesive layer and the ceramic binder layer. Uriu et al. fails to teach or suggest the above significant feature achieved by the present invention.

Therefore, one having ordinary skill in the art would not have been motivated to conceive the claimed invention based on the teaching of Uriu et al.

“To establish a *prima facie* case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. If an independent claim is nonobvious under 35 U.S.C. § 103, then any claim depending therefrom is nonobvious.” (M.P.E.P. § 2143.03) Thus, Claim 1, as well as Claims 7-11 and 14 dependent on Claim 1 could not be obvious over the reference.

As to Claim 3, the Examiner asserts that Uriu et al. does not teach that the foamable adhesive contain expandable particles, however the use of expandable particles to effect foaming in an adhesive is well known and would have been an obvious design choice.

However, the patentability of the claimed invention is evidenced by the unexpected advantages obtained by the invention that are demonstrated in Table 4 from page 34 of the

present application. Example 1 comprising thermal expandable fine particles possesses excellent characteristic such as electrode shift and laminating property comparing with Comparative example 1 which does not comprise thermal expandable fine particles. Uriu et al. is equivalent to the Comparative example 1 since Uriu et al. does not comprise thermal expandable fine particles.

Moreover, Claim 3 has been amended as well as Claim 1 to recite "applying a ceramic slurry onto (A) said electrode pattern formed on the adhesive layer and (B) an exposed surface of said adhesive layer to form a ceramic binder layer which adheres to said electrode pattern and said exposed surface, thereby forming a ceramic green sheet on the carrier sheet" which is neither taught nor suggested by Uriu et al.

Thus, Claim 3, as well as Claims 4 and 12 dependent on Claim 3 could not be obvious over the reference.

As to Claim 5, the Examiner asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to have selected an adhesive which displayed a decreased level of adhesive when heated, such as a side chain crystalline resin.

However, the patentability of the claimed invention is evidenced by the unexpected advantages obtained by the invention that are demonstrated in Table 5 from page 35 of the present application. Example 2 comprising a side chain crystalline resin possesses excellent characteristic such as electrode shift and laminating property comparing with Comparative examples 2 and 3 which do not comprise a side chain crystalline resin. Uriu et al. is equivalent to the Comparative examples 2 and 3 since Uriu et al. does not comprise a side chain crystalline resin.

Moreover, Claim 5 has been amended as well as Claims 1 and 3 to recite "applying a ceramic slurry onto (A) said electrode pattern formed on the adhesive layer and (B) an exposed surface of said adhesive layer to form a ceramic binder layer which adheres to said electrode pattern and said exposed surface, thereby forming a ceramic green sheet on the carrier sheet" which is neither taught nor suggested by Uriu et al.

Thus, Claim 5, as well as Claims 6 and 13 dependent on Claim 5 could not be obvious over the reference.

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New Claims 15-22

Claims 15-22 have been added. These claims are dependent on either one of Claim 1, 3 or 5. Therefore, at least for the reasons above, Claims 15-22 should be allowable.

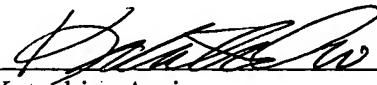
CONCLUSION

In light of the Applicant's foregoing Remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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